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AND

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Description of Plate V.

Plate V represents the so called protective mimicry of insects. The last few years much ink has been spilled in the discussion of this subject; some writers agreeing that it is undoubtedly protective mimicry and others only accidental resemblance. Drummond, in his work on "Tropical Africa," speaks as follows: "Carlyle, in his blackest visions of 'shams and humbugs' among human kind, never saw anything so finished in hypocrisy as the naturalist now finds in every tropical forest. There are to be seen creatures—not singly, but in tens of thousands—whose very appearance, down to the minutest spot and wrinkle, is an affront to truth; whose every attitude is a pose for a purpose, and whose whole life is a sustained lie. Before these masterpieces of deception the most ingenious human impositions are vulgar and transparent. Fraud is not only the great rule of life in a tropical forest, but the one condition of it."

We are indebted for the plate to the kindness of M. J. F. Sachse, editor of the "American Journal of Photography," who made the original photograph.

This species is mentioned by Wallace in his work on the Malay Archipelago in the following language: "Its upper surface is of a rich purple, variously tinged with ash color, and across the fore wings there is a broad bar of deep orange, so that when on the wing it is very conspicuous. This species was not uncommon in dry woods and thickets, and I often endeavored to capture it without success, for, after flying a short distance, it would enter a bush among dry or dead leaves and however carefully I crept up to the spot I could never discover it till it would suddenly start out again and then disappear in a similar place. At length I was fortunate enough to see the exact spot where the butterfly settled, and though I lost sight of it for some time, I at length discovered that it was close before my eyes, but that in its position of repose it so closely resembled a dead leaf attached to a twig as almost certainly to deceive the eye, even when gazing full upon it." I have noticed the following interesting quotation: "J. A. de Mandelsloe, who made a voyage to the East Indies in 1639, tells us that not far from the Fort of Ternate grows a certain shrub called by the Indians *Catopa*, from which falls a leaf, which, by degrees, is supposed to be metamorphosed into a butterfly." This was one hundred and ninety years before the butterfly was described by Horsfield.—ED.

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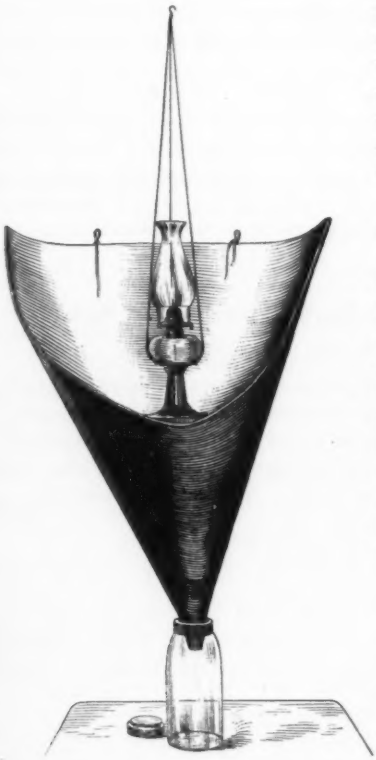
A TRAP FOR CAPTURING COLEOPTERA.

By T. B. ASHTON, Tonganoxie, Kansas.

A good method of capturing many valuable species of insects, for the purpose of enriching the cabinet of entomologists, is to make from builders' past-board a funnel two feet in diameter and three feet high, with the apex one and a half inches in diameter. Eighteen inches from the top of the funnel and one-third of its circumference in front should be cut out, leaving an opening. A wire should be fastened around all the rim to keep the funnel in proper shape. Two loops should be made in the wire six inches each side of the centre of the top of the funnel to fasten it in position when in use. The seam in front of the funnel can be lapped and held together with glue. A coat of glue, or varnish, should be spread over the inside of the funnel so as to render it more slippery to the feet of insects. The funnel may be of any

diameter and made of tin, or any other suitable material, but paste-board answers the purpose, and is not expensive.

Procure a two-quart glass fruit-jar with an air-tight top and fasten in it at the bottom two ounces of Potassium cyanide, and place plenty of paper packing over it. Add a few drops of water to the packing to moisten the cyanide and then close the jar till wanted for use. With proper care the cyanide will retain its strength, and can be used during the collecting season.



The next part of the trap is a lamp that gives a bright light. A wire ring should clasp the lamp below the oil bowl. This ring should have three small wires fastened to it, equal distances apart, and extending upwards two feet and twisted together down to near the chimney and have a loop on the upper end to hang the lamp by when in use.

On a dark, still evening in the spring-time, when insects are on the wing, fasten the funnel to the side of a building, or some other suitable object, with its small end resting snugly in the mouth of the cyanide jar, and then suspend the lighted lamp in the funnel to shine forth from the front opening and let it remain there for a few hours, then close the jar till morning, and by the light of day open and spread its motionless and silent contents on some white paper, then the entomologist will enjoy a treat such as is

seldom seen,—his eyes beholding beauties in many forms and so gaily colored, and then in such numbers, that his mind will be filled with wonder and delight. There will be many Lepidoptera and a few Neuroptera that will have all their beauty spoiled by friction with each other as they mix together in the fumes of the cyanide. A few Hymenoptera, Hemiptera and Orthoptera will be found in fair condition to claim attention. There will be Coleoptera represented by species in many families; some are large, others small, and many that are very minute, but all, with a little brushing, fit for a place and a name in a naturalist's cabinet.

For capturing Coleoptera that are attracted by light, I consider this the best trap that I have ever seen, and, while I claim to be the inventor of it, I do not intend to get it patented, and I invite all coleopterists to make use of it and do me the kindness to report their success or failure to the ENTOMOLOGICAL NEWS.

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Notes on some Spiders described by Hentz.

By NATHAN BANKS, Washington, D. C.

Since Hentz published his papers on the spiders of the United States quite a number of his species have remained in obscurity. During the past season I have found a few not hitherto recorded, and decided that certain known species were synonymous with some of those described by Hentz. The following notes are on the above two classes of facts.

MICROGNATHIDÆ.

Thalamia parietalis Hentz.

Two specimens of this peculiar and interesting spider were found in the corners of a room in Texas. The genus is close to *Œcobias*, but I can find only two tarsal claws. It may be related to *Omanus*.

DRASSIDÆ.

Trachelas tranquilla Hentz.

Clubiona tranquilla Hentz; *Trachelas ruber* Keys.

This spider is common through all the United States east of the Mississippi River, and I have specimens from Texas and Missouri [S. Van Ingen]. I think that there can be no doubt that this spider, several times described under the name of *T. ruber* Keys. is the *Clubiona tranquilla* Hentz.

AGALENIDÆ.

Dictyna sublata Hentz.

Theridion sublatum Hentz; *Dictyna muraria* Em.

I see no reason why this synonymy is not perfectly clear. The species is found in Mississippi, and specimens vary to resemble Hentz's figure. *D. arundinaceoides* Keys. is perhaps the same species. As to Hentz's other *Dictyna* I am not sure what they are; *T. foliaceum* is perhaps *D. frondeum* Em.

THERIDIDÆ.

Linyphia conferta Hentz.

Ithaca and Long Island.

Bathyphantes anglicanum Hentz.

Theridion anglicanum Hentz.

Two females and two males of this species were taken in Texas. The male is red like the female.

EPEIRIDÆ.

Epeira directa Hentz.

Brazos County, Texas. They vary somewhat in markings, a central light stripe is frequently present on the abdomen and often each side of this a row of six black dots. On the venter there are two dark stripes which unite at the spinnerets and at the lung slits. It shows some approach to *Tetragnatha*.

Epeira sanguinalis Hentz.

This very delicate spider was found in the nest of a mud-wasp in Texas in September. The front legs are very spiny. The venter is white, except the black epigynum.

Epeira scutulata Hentz.

E. punctillata Keys.

One specimen (♂) of this species has been recorded from Illinois by Keyserling under the name of *Epeira punctillata*. I have found an adult ♀ in July on Long Island, N. Y. It was at the center of a vertical orb web in an evergreen tree. Young specimens were found in evergreen trees in December.

THOMISIDÆ.

Runcinia aleatorius Hentz.

Thomisus aleatorius Hentz; *Runcinia brendelli* Keys.

Hentz described the ♂ of this species, and it seems that some

arachnologists knew of the identity of the two species, yet the synonymy has not previously been given. Mississippi, Texas, Iowa.

LYCOSIDÆ.

Lycosa erratica Hentz.

Tarentula lepida Keys.

This species is quite easily recognized by the form of the central dark stripe on the abdomen.

Aulonia? funerea Hentz.

Lycosa funerea Hentz.

Washington, D. C. Not uncommon. The abdominal markings do not quite agree with Hentz's figure, yet the specimens vary somewhat. Its position in *Aulonia* is very doubtful. It may form a new genus. The cephalothorax is full as high between the second and third pairs of legs as in the eye region.

Dolomedes urinator Hentz.

D. lanceolatus Hentz is the ♂ of this species.

Dolomedes scriptus Hentz.

D. scapularis Koch.?

What has been taken as *D. tenebrosus* Hentz is this species. What I feel sure is *D. scriptus* H. has the epigynum as figured by Emerton for *D. tenebrosus* and very similar to that of *D. scapularis* as figured by Keyserling. *D. tenebrosus* H. has a much broader epigynum and a broad septum, which does not, however, cover the cavity. It is also quite different in markings.

Oxyopes salticus Hentz.

O. astutus Hentz is the ♂ of this species.

ATTIDÆ.

Dendryphantes retarius Hentz.

Attus retarius Hentz ♀; *Plexippus puerperus* Peck, not Hentz.

From D. C. southward to Texas. Peckham has wrongly determined this species. I see no reason why it is not a good *Dendryphantes*. *Attus sylvanus* Hentz is probably the ♂, as Peckham states, yet it may be another species.

Dendryphantes nubilus Hentz.

Attus nubilus Hentz.

This is perfectly distinct from *D. capitatus*. It is very variable in markings, some almost white; a small darker specimen may be distinct. Mississippi and Texas.

Dendryphantes octavus Hentz.
Attus octavus Hentz.

Dendryphantes capitatus (Hentz) Peck, not Hentz.
Attus parvus (Hentz) Peck, not Hentz; *Attus æstivalis* Peck.

The common spider described and figured by Hentz as *Attus octavus* is certainly not an *Eris*, and I have no doubt but that it is what has been described by Peckham as *Attus capitatus*, of which he makes *Attus parvus* the female. The latter is either an *Eris* or *Zygoballus*, probably the latter, and may even be *Z. bettinii* Peck. I see no reason for considering *Attus capitatus* Hentz as the male of what Peckham describes as such, the markings of the cephalothorax are certainly different, and the difference in size is enormous. Moreover, Hentz did not give *Attus parvus* as common, while he does state so of *Attus octavus*. Nearly all the specimens of this species which I have seen from the South appear as Hentz figures *Attus octavus*.

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NOTES ON THE EARLIER STAGES OF LEPISESIA FLAVOFASCIATA Barnst.

By Carl Braun, Bangor, Me.

On Memorial Day 1888, at 4 P.M., when returning from a bog five miles distant from this city, where I had spent the day collecting *Chionobas jutta* and other rare lepidoptera, by the edge of a clump of woods near home, my attention was called to a bumble-bee-like creature which was fluttering among the violets just in blossom in order to obtain some honey as I thought. Its flight seemed to me peculiar, and by observing it closer I saw at once that it was not a large bee, but a small *Macroglossa*. Having my net at hand I caught it at once, and found, after bottling it, that it was a *L. flavofasciata*, which species I had often before admired in the collection of Prof. C. H. Fernald, then at the State College in Orono, Me. After the Insect had become quieted I took it from the bottle immediately and examining it closer found that it was a ♀. In the hope of obtaining ova from this exceedingly rare and desirable species, I quickly put it into a small paper-box with perforated bottom and glass top. These boxes I always carry with me on my collecting trips to keep females from which I desire to obtain ova. I carried the box care-

fully in my hand, and after a few minutes, to my great delight, it came to life again. When arriving at my home I put it into a larger paper box with gauze top fitted up for the purpose for females to lay their ova in. I at once procured a few fresh leaves of wild honeysuckle which, I believed at the time, to be the food-plant of this species, and coated several of them thinly with maple honey. I have always obtained from females of Sphingidæ in this manner more ova than without the food-plant. I change the leaves twice a day and keep the boxes in my breeding-house in a cool place. I have often watched *Sphinx kalmiæ* and *drupiferarum* when in a starving condition putting the proboscis out and sucking the honey from these coated leaves. This of course sustains life and helps them to lay all the eggs. On the other hand if not fed, fresh females of the flower-visiting Sphinges will in most every case, die of starvation before they have laid half their eggs. By examining the ovary after death I have generally found this to be the case. This by way of explanation. But to return to my ♀ *Lep. flavofasciata*, I watched it closely for two days, examining the box most every hour, without finding any ova. I had almost given up hope of obtaining any; yet, to my great delight on Saturday morning, June 2d, I found four small grass-green globular eggs, two of which were attached to the bottom of the box and two glued to the stem of a leaf. I changed the leaves, putting the eggs carefully back into the box. That afternoon I found ten more eggs and next day twenty-two more. June 4th I counted fifty-seven ova. On the morning of June 5th I found the ♀ dead and no more eggs. I believed she had laid them all, and of course must have deposited ova before I had captured her; this latter proved to be a fact. The young larvæ hatched after five to six days; they would not eat the honeysuckle and I greatly feared losing them. In my anxiety I went to the place where I had taken the ♀ and found among other plants a species of *Epilobium*, and by cleansing the leaves I found to my great astonishment attached to the underside of one leaf two eggs of this same species. The female was evidently depositing eggs at the time I caught her; I had found the food-plant without doubt, as the starving larvæ readily took to it and seemingly devoured with great appetite their well-known food. I am also quite sure I would have lost the young larvæ but for the honey on the leaves of the honeysuckle, which kept them

alive. Here and there they had nipped a leaf on the edges and the light honey coating had disappeared. Of all the fifty-seven larvæ I only succeeded in bringing out nine to the pupal state, and the next season only five, three females and two males to the imago state, large full grown imagos, of which two pairs are in my collection. The imago of this insect has been described by Barnst, but the earlier stages according to Prof. Smith's book on the Sphingidæ are still unknown,

I have not much time for this work, and I had almost my mind made up to turn over my numerous notes on original work to somebody better fitted to the task, yet I will try to do the best I can if the editor of ENTOMOLOGICAL NEWS will allow me the space. The eggs, the four larval stages and the pupæ I will describe next month. I have given this introduction, as, I believe, it will be of interest to many of the readers. Next I shall attempt to describe the earlier stages of *Platarctia parthenos* and *Smerinthus cerisyi*, of which species I raise some every year. I have the eggs, the larvæ in all the stages in alcohol, and inflated, of these species.

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ELEMENTARY ENTOMOLOGY.

LEPIDOPTERA.

Butterflies and moths, or LEPIDOPTERA (from the Greek, *lepis* a scale, and *pteron* wing), comprises those insects characterized by cylindrical, compact bodies, small head, mouth parts (in most species) developed for sucking, maxillæ prolonged into a tongue, mandibles obsolete, wings covered with minute scales, transformations complete. The word butterfly comes from the Anglo-saxon buttor-fleoge, or the resemblance of some common species (*Colias*) to butter in color. In German they are called schmetterlinge, from *schmetten*, cream. *Molken-dieb* (the whey-thief) is another name. The association with milk in its three forms—butter, cream and whey, is remarkable.

The order LEPIDOPTERA is separated into two grand divisions: RHOPALOCERA (from two Greek words, meaning knob and horn), butterflies or diurnals, and HETEROCERA (variable and horn), moths or nocturnals. The butterflies are thus separated from the moths by the structure of the antennæ or feelers. In the former

being thread-like, with a little swelling or knob on the end, and in the moths a great variety of shapes other than this. In the Heterocera, or moths, they are filiform (thread-like), setiform (like a bristle), fusiform (tapering at each end), serrate (saw-like), pectinate (comb-like), filiciform (fern-like) and plumose (feather-like). There was formerly used another division of the moths called Crepuscular (from *creper* dark, dusky), or those that fly at dusk and in the early morning. The butterflies are further distinguished from the moths by their relatively smaller bodies in comparison to expanse of wings, less hairy character of thorax and abdomen, and when in repose they carry the wings erect ; the chrysalids are naked and not buried in the earth, and the spiral tongue or haustellum, is long and well developed. Rhopalocera (butterflies, diurnals) are found all over the world from the frozen shores of the Arctic Ocean to the hot plains of Equatoria. They are always more abundant in the vicinity of water, and are always a welcome sight to the thirsty traveller.

Linnaeus included all butterflies in the genus *Papilio*. He was acquainted with about 760 species of moths and butterflies; they are now divided into well-defined families and numerous genera and species.

The food of butterflies consists principally of the sweet liquids drawn from flowers, which they reach by means of their long tongues.

The name butterfly suggests balmy Summer days, bright sunshine and green foliage. "On the side of a mountain as the sun was setting, throwing different portions into the shadow from the base to the top, the writer has seen the butterflies fly from cluster to cluster of flowers up the acclivity, going just fast enough to keep in the sunshine."* While this is true of butterflies as a whole, there are numerous exceptions. Some of the Satyridæ only fly in the densest woods, and others only at dawn and dusk of evening. "In Continental India, at Sangor, Capt. de la Chaumette describes *Melanitis leda* and an allied species as flying at sunset under the Neem trees, resting for a long time motionless on the ground and will not move until you almost tread upon them."

The species belonging to the MORPHINA have similar habits. Some of the Indian species remain motionless in repose all day,

* Prof. G. H. French, in "Butterflies of Eastern United States."

but when the sun is about to set they are to be seen everywhere, and are sometimes mistaken for bats. Every species has its own peculiar habits as to flight, time of appearance, method of egg deposition, etc. Some kinds wander from place to place and flower to flower, and others live their whole life in a very limited area. Butterflies often migrate in such numbers as to even obscure the sun. These congregations are usually made up of a single species. "A migration of butterflies was observed in Switzerland on the 10th of June, 1828: Madame de Meuron Wolff and her family established during the Summer in the district of Grandson, Canton de Vaud, perceived with surprise an immense flight of butterflies traversing the garden with great rapidity. They were all the species called Belle Dame by the French, and by the English, Painted Lady (*Vanessa cardui*). They were all flying close together in the same direction, from South to North, and were so little afraid when one approached that they turned not to the right or left. The flight continued for two hours without interruption, and the column was about ten or fifteen feet broad."

Mr. Charles J. Anderson encountered in Southwestern Africa, for two consecutive days, such immense myriads of lemon-colored butterflies, that the sound caused by their wings was such as to resemble "the distant murmuring of waves on the sea-shore." They always passed in the same direction as the wind blew, and, as numbers were constantly alighting on the flowers, their appearance at such times was not unlike "the falling of leaves before a gentle autumnal breeze." Moufet says: "Wert thou as strong as Milo or Hercules, and wert fenced or guarded about with an host of giants for force and valor, remember that such an army was put to the worst by an army of butterflies flying in troops in the air in the year 1104, and they hid the light of the sun like a cloud."—ED.

(To be continued.)

Notes and News.

ENTOMOLOGICAL GLEANINGS FROM ALL QUARTERS OF THE GLOBE.

[The Conductors of ENTOMOLOGICAL NEWS solicit, and will thankfully receive items of news, likely to interest its readers, from any source. The author's name will be given in each case for the information of cataloguers and bibliographers.]

In the future all papers received for publication in the News will be printed according to date of reception.

IT SEEMS foolish for a man to enter into an argument with a wasp. A wasp always carries his point.—*Yonkers Statesman.*

WE have received a photograph of the rare moth *Erebus zenobia* caught in a woods near Tiffin, Ohio, October 20, 1890, at 10 P.M. It was taken at sugar by Mr. Lewis Ullrich. Mr. Ullrich says in regard to his capture: "I collected in this woods about three nights every week after July 10, 1890, in the same place where this was caught, but did not see this species until the night mentioned above."—ED.

I HAVE received through the kindness of Mr. J. T. Mason, of Houston, Tex., a moth probably not before recorded as belonging to our fauna. We are indebted to the industry of Mr. Mason for being able to add such a fine species to our lists. The only reference I can find to the species is in Vol. I. of Hübner's "Exotische Schmetterlinge," where it is beautifully figured under the name of *Diphthera festiva elegans*. Both the upper and undersides and both sexes are given. This is probably the moth Mr. Mason refers to in his note in ENT. NEWS, Vol. II., p. 76, under the name of *Euglyphia haroglyphisa*.—ED.

FASHION'S NEW FAD.—Not content with her slaughter of the innocents in the matter of birds, Dame Fashion has extended her murderous designs to moths and butterflies. The gorgeous hues of the wings of some of these are deemed effective for dress decorations, and we are told that in Paris exquisite gauze ball toilets are "appropriately and fancifully strewn with natural butterflies." Fanciful, it is granted, but never appropriate. Butterflies appear also on fans, but here only the wings are used, with the body, antennæ and legs sketched in afterward by an artist. Beautiful effects are produced, it is said, by painting bunches of flowers on which the insects seem to hover. When it is reflected that a single gauze fan of the size now in vogue may hold a dozen or more butterflies or moths, it is easy to estimate in what enormous quantities these creatures must be taken to satisfy even a small demand. Truly a fashionable toilet is becoming a composite thing, with dead birds and butterflies, hair from Indian beggars, and Mexican bugs as jewelry, held by golden chains.

ANTS AS SURGEONS.—Ants are terrible fighters. They have very powerful jaws, considering the size of their bodies, and, therefore, their method of fighting is by biting. They will bite one another, and hold on with a wonderful grip of the jaws, even after their legs have been bitten off by other ants. Sometimes six or eight ants will be clinging with a death grip to another, making a peculiar spectacle, some with a leg gone, and some with half the body gone. One singular fact is that the grip of an ant's jaw is retained even after the body has been bitten off and nothing but the head remains. This knowledge is possessed by a certain tribe of Indians in Brazil, who put the ants to a very peculiar use. When an Indian gets a gash cut in his hand, instead of having his hand sewed together, as physicians do in this country, he procures five or six large, black ants, and holding their heads near the gash, they bring their jaws together in biting the flesh, and thus pull the two sides of the gash together. Then the Indian pinches off the bodies of the ants and leaves

their heads clinging to the gash, which is held together until the gash is perfectly healed.

MIMICRY of *Danais archippus* presented itself very strikingly early in September, 1889, while looking for *Catocala* in wood lot well cleared of undergrowth. It was in Astoria, Long Island, late in the afternoon when about to return home that I noticed many Danaidæ flying singly and in a restive way toward a circular clearing on edge of woods, and would invariably disappear in the foliage as I supposed it to be. I lingered there for half an hour and observed their coming in from meadows adjoining, and wondered why they were flying so high when they reached the timber line, and many passing out of sight at a particular spot of that circular clearing. I stationed myself closer and almost under overhanging branches of a Swamp Maple (*Acer rubrum*), on which I noticed an apparently dead or dying branch, having the red leaves of Autumn foliage thereon. It contrasted strangely with the verdure of other branches and trees of vicinity. I have seen such branches in August destroyed by the agency of Locusts (*Cicada septemdecim*) and much resembling that in question. Presently I observed a *Danaid* circling overhead for a few minutes, flying towards this branch and alighting on *underside* of one of its branchlets, then dropping and folding up its wings hurriedly. One more leaf had now been added, and the mimicry revealed to my senses. It was as perfect as it could be. Every *Danaid* hung or rested there limp and lifeless as it were, and not in the least disturbed by the jarring occasioned by subsequent arrivals of others. The lowest part of this dead limb, which it was, because devoid of any leaf, was twelve feet above ground, so that I could not reach it with my net. I calculated that from six to eight dozen *Danaids* were thereon. I tossed the net upward, shaking the limb when it came in contact with it, and the air seemed to be brilliant with fulvous tints of terrified butterflies. I subsequently revisited the spot twice during the following week, but failed to observe *Danaids* in same locality or tree.—RICHARD E. KUNZE, M.D., New York.

NOTES ON MT. DESERT DRAGONFLIES.—The following species of Odonata were taken during the Summer of 1890 on the island of Mt. Desert, Maine, and within a few miles of the village of Bar Harbor.

I am indebted to Mr. Philip P. Calvert, of Philadelphia, who has kindly identified the specimens for me. The notes on the colors of the eyes were made while the specimens were fresh and not yet faded.

AGRIONINÆ.

Argia violacea Hag.—July 1st, ♂.

Ischnura verticalis Say.—Orange variety. June 25th, 1 ♀; eyes brown above.

Enallagma Hageni Walsh.—July 1st, 1 ♂.

AESCHNINÆ.

Neuræschna vinosa Say.—July 25th, 1 ♂; eyes greenish, becoming brown above.

CORDULINÆ.

Cordulia semiaquea Burm.—July, ♂ and ♀; eyes brown.

LIBELLULINÆ.

Libellula quadrimaculata L.—June 28th, 1 ♂; eyes brown above, greenish bloew.

Celithemis elisa Hag.—June 28th, July 10th; several males and females; eyes chocolate-brown above.

Nannothemis bella Uhler.—July 1st, four females; eyes above brown, below gray, with a brown stripe down the centre.—DAVID JAYNE BULLOCK, Philadelphia, Pa.

NOTES ON THE LARVA OF *Catocala habilis*.—Last summer while searching for *Agrotis* under the loose bark of the hickory I was surprised to find many larvæ of the above named species. They are not gregarious, as I afterwards learned, while feeding them in confinement, but are eminently nocturnal and only feed by night and would naturally seek the shade and protection of the loose bark during the day. Every strip of bark sheltered more or less of them. They were made up of two broods. The larger ones were nearly full grown, while the smaller ones had hardly got through the second moult. The larvæ of this species are so discommoded by light that they seek the darkest corners of the rearing cage during the day, and at night if a strong light is brought to bear upon the bush while they are feeding, they will immediately stop and will not go on with the repast until it is removed. I do not know whether the larvæ of this species has been written up or not. I believe little is known about a majority of the larvæ of this genus, but venture to say this one resembles the larva of *C. Ultronia* in form, but is somewhat smaller and dark iron-gray variegated with small white spots. The last pair of pro-legs are very much spread or technically speaking, divaricate. When about to transform to pupa they leave the bush and form a cocoon an inch or an inch and a half below the surface of the ground. In this respect they differ from others of the genus. The early brood came out winged flies the 15th of July and the others a month later.—R. BUNKER, Rochester, N. Y.

ON Saturday, April 5th, Mr. Wm. J. Fox, of the Academy of Natural Sciences of Philadelphia, and Mr. Charles W. Johnson, of the Wagner Institute of Philadelphia, sailed for Jamaica. They go solely for the purpose of studying and collecting the insect fauna of that island. They expect to be gone from six weeks to two months.—ED.

THE LARVÆ of *Telea polyphemus* generally are not found in any great number on one and the same food-plants. Late in August, or early in September, 1887, I took from three White Birches, none over fifteen feet high and growing so close together that branches interjoined, fifty-six of these larvæ, about half of full grown size. A number of other adult larvæ of same were collected from *Betula alba*, near by, on the bank of Harlem River, city of New York.—RICHARD E. KUNZE, M.D., New York.

Identification of Insects (Imagos) for Subscribers.

Specimens will be named under the following conditions: 1st, The number of specimens to be unlimited for each sending; 2d, The sender to pay all expenses of transportation and the insects to become the property of the American Entomological Society; 3d, Each specimen must have a number attached so that the identification may be announced accordingly. Address all packages to ENTOMOLOGICAL NEWS, Academy Natural Sciences, Logan Square, Philadelphia, Pa.

Insects have been named for E. Wilkinson, C. W. Chamberlain, Daniel G. Cox, W. E. Longley, B. F. Goss.

Entomological Literature.

GARDEN AND FOREST, vol. iv, No. 158, p. 99.—An insect pest of Cattleyas (*Isosoma archidearum*). A fig. of the insect with larva and pupa.

THE ENTOMOLOGIST'S MONTHLY MAGAZINE, March, 1891.—A fortnight in Algeria, with descriptions of new Lepidoptera (concluded), by E. Meyrick. Holiday captures of Lepidoptera in Switzerland in 1886, by G. T. Baker. Notes on some British and Exotic Coccidæ (No. 19), by J. W. Douglas. On the new Australian Vine Pest, by Dr. E. Bergroth. On two new species of *Heteromera* from Japan, by George Lewis. *Cryptohypnus dermestoides* and its allies, by Geo. H. Horn, M.D. Description of the larva of *Hypena rostralis*, by S. T. Porritt. *Sphinx pinastri* as a British insect, Eds. *Plusia moneta* F. in France, Id. *Acidalia immorta*, by Rev. J. Greene. Coleoptera and Lepidoptera at Bundoran Island, by Rev. W. F. Johnson. *Hydroporus septentrionalis* and other Coleoptera in the Plymouth District, by James H. Keys. A query as to the food of certain Dipterous larvæ in nests of Vespidæ, by R. Newstead. Searcity of Aculeate Hymenoptera in South Devon, by G. A. J. Rothney. Aculeate Hymenoptera in Wiltshire, 1890, by R. C. L. Perkins.—April, 1891. —Annotated List of the British Tachiniidæ (continued), by R. H. Meade. Notes on some British and Exotic Coccidæ (No. 20), by J. W. Douglas. *Micropteryx sangii*, a new species from birch, by J. H. Wood. On the erroneous inclusion of *Catoptria* (*Grapholitha*) *decolorana* Fr. in the British fauna, by C. G. Barrett. *Pempelia adelphella* id. Description of a new species of *Anaspis* from Scotland, with remarks, by G. C. Champion. On two new species of Mexican Histeridæ, by G. Lewis. Wiener Entomologischen Verein, Eds. A means of preserving collections in dry, hot countries, id. Newspaper entomology. Coleoptera at Church Stretton, by W. G. Blatch. *Odontæus mobilicornis* at Wellington College, by E. F. Elton. On the occasional development of wings in species of Hemiptera, usually Micropterous or Apterous, by J. W. Douglas. *Hepialus velleda* in abundance in Somerset, by C. G. Barrett. *Hesperia lineola* in Somerset, id. A black variety of *Phigalia pilosaria* at Gainsborough, by Rev. Canon Fowler. Note concerning *Pseudomacromia elegans* and *pretiosa* Karsch., by R. McLachlan. *Anthophora pilipes* at

Ilfracombe, by E. Saunders. Note on some Irish Trichoptera, by J. J. F. X. King.

LEPIDOPTERA INDICA. By F. Moore.—We have seen the first five parts of this grand work, and the first thing noticed was that the names of the species figured were not on the plate, but were referred to the text by numbers. This impairs the value of the work very much, and is an endless nuisance to the working lepidoptertst. This great fault also occurred in Rhopalocera Malayana. We can't understand why practical entomologists, who get out works, make this mistake. To see how this should be done we refer to the "Biologia Centrali-Americana" and the works of Staudinger, Romanoff, Saalmüller, etc. Thus far forty fine colored plates have been published illustrating the subfamily Euplœinæ, in which the author includes the old genera *Hestia*, *Danais*, *Euplœa*, divided into a great many new ones. This will be an exceedingly valuable work to those seeking an aid to identification.

OREGON AGRICULTURAL EXPERIMENT STATION, Bulletin No. 10.—Experiments with the Codling Moth and with a combined Fungicide and Insecticide. The Hop Louse; Life-history, Prevention, Remedies, etc., by F. L. Washburn, entomologist.

DELAWARE COLLEGE AGRICULTURAL EXPERIMENT STATION, Bulletin No. 12.—Injurious insects and insecticides. The following insects are considered: Black Peach Aphis, Spring Canker Worm, Rose Chafer, Harlequin Cabbage Bug, Cut Worms, Angoumois Moth, Flea Beetles.

PROCEEDINGS OF THE ENTOMOLOGICAL SOCIETY OF WASHINGTON, vol. ii, No. 1.—List of members. Nathan Banks: On *Thalamia parietalis* Hentz. Otto Heidemann: Note on the occurrence of a rare Capsid near Washington, D. C. L. O. Howard: The habits of *Eurytoma*, a new remarkable genus of Encyrtinæ; The habits of *Pachyneuron;* The parasites of the Hemerobiinæ. C. L. Marlatt: The *Xanthium trypeata*, *Trypeata æqualis* Lw.; Observations on the habits of *Vespa;* Notes on the genus *Metopius*, with description of a new species and table of species; The final moulting of Tenthredinid larvæ. Geo. Marx: A contribution to the knowledge of North American spiders; On the effect of poison of *Lathrodectus mactans* Walck. upon warm-blooded animals. C. V. Riley: Notes on the larva of *Platypsyllus;* On the difficulty of dealing with *Lachnosterna;* A viviparous cockroach; On the time of transformation in the genus *Lachnosterna*. E. A. Schwarz: Annual address of the president, North American publications on entomology; A list of the blind, or nearly eyeless Coleoptera hitherto found in North America; Labeling specimens; Note on the food-habits of *Xyleborus tachygraphus* and *X. dispar;* Coleoptera on the Black Locust; Notes on the breeding habits of some *Scolytids;* Contribution to the life-history of *Corthylus punctatissimus* and description of *C. spinifer* n. sp.; Feeding habit of a species of Empidæ. C. H. Townsend: Hemiptera collected in southern Michigan; The North American genera of Calyptrate Muscidæ; Note on

the genera *Triptotricha* Lw. and *Agnotomyia* Will.; Notes on the North American Tachinidæ sens. lat. with descriptions of new species. P. R. Uhler: Observations on some remarkable forms of Capsidæ.

THE TERTIARY INSECTS OF NORTH AMERICA by Samuel H. Scudder, being vol. xiii, Hayden U. S. Geological Survey of the Territories; 663 pages, 28 plates, with many figures. Mr. Scudder states that this grand work was commenced more than a dozen years ago. The Myriapoda and Arachnides are treated of in conjunction with the various orders of insects. Such works as this mark eras in the studies of which they treat.

ENTOMOLOGISCHE NACHRICHTEN, xvii, No. 3, February, 1891.—Miscellanea Coleopterologica, by C. Schaufuss; *Chevrolatia Grouvellei*, Mexico, n. sp. Tryphonid studies,* by Dr. Kriechbaumer.—No. 4, February, 1891.—On the life-history of *Theridium sisyphium* Clerk., and on *Hemiteles sisyphii* n. sp.* ♂♀, by C. Verhoeff. *Rhizotrogus limbatipennis* Villa, an attempt to distinguish this species.* by E. Brenske. The Libellulid genera *Orthetrum* Newm. (*Libella* Brauer) and *Thermorthemis* Kirby,* by Dr. F. Karsch.

LE NATURALISTE CANADIEN, February, 1891.—Entomological Notes: Descriptions of new species, by J. Hausen; on Coleoptera, *Pterostichus* (*Dysidius*) *pulvinatus*, sp. nov., northern Vermont.

ZOOLOGISCHER ANZEIGER, Feb. 16, 1891.—Note on the musculature of the halteres, by R. v. Lendenfeld.

NOTES FROM THE LEYDEN MUSEUM, xii, No. 3, July, 1890.—Note on *Tyana superba* Moore, by P. C. T. Snellen. On *Cyriocrates zonotor* Thoms., by C. Ritsema. Descriptions of new Coleoptera of the family Eumolpidæ,* by E. Lefevre. Description of a new species of the genus *Ectatorhinus* (Coleoptera: fam. Curculionidæ*), by W. Roelofs.

COMPTE RENDU. SOCIETE ENTOMOLOGIQUE DE BELGIQUE, Feb. 7, 1891.—Descriptions of new Hesperidæ, 1st part, by P. Mabille; contains a large number of new species from all parts of the world, including *Leucochitonea fuscescens*, Honduras, *Antigonus cupreiceps*, Honduras, *Achlyodes halidus*, Merida, *Narga scopas*, id., *Butleria polydesma*, id., *B. quadristriga*, id., *Cecropterus Dhega*, Jalapa, *Proteides hondurensis* Honduras, *P. midia* Merida, from North America, and the following new genera: *Sape*, *Hypoleucis*, *Narga*, *Eretis*, *Toxidia*. Descriptions of Coleoptera from the mountains of Kashmir,* by L. Fairmaire; *Blapidurus*, *Botiras*, n. gen.

LE NATURALISTE (Paris), 1 Mars, 1891.—The Acarinæ of plants, their anatomie, Menegaux. Diagnosis of a new Lepidopter,* P. Dognin.

DIE VERWANDSCHAFT ZWISCHEN DER NOCTUIDEN-FAUNA VON NORD AMERIKA UND EUROPA [von] Herr Aug. R. Grote (extract from "Verhandlungen der Gesellschaft Deutscher Naturforscher und Arzte," Bremen, 1890), 7 pages.

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* Contains new species other than North American.

ENTOMOLOGISCHE NACHRICHTEN, xvii, No. 5, March, 1891:—Review of the Odonata collected by Dr. Paul Preuss in German West Africa in 1890,* Dr. F. Karsch; *Mesocnemis*, *Hadrothemis*, *Archiclops*, n. gen.

BIOLOGISCHES CENTRALBLATT, xi, No. 3, Mar. 1891.—From insect life, Maria Grafin Linden; on some larvæ of *Phryganea striata*.

LE NATURALISTE CANADIEN, March, 1891.—Entomological notes, J. Hausen; *Platynus* (*Anchomenus*) *testaceonotus* n. sp., Ste. Rose, Quebec.

BULLETIN DE LA SOCIETE ZOOLOGIQUE DE FRANCE, xv, No. 7, July, 1890.—Note on the parasitic fly of the potherbs of the genus *Allium*, X. Raspail; *Musca alliorum* = *brassicaria* L?

LE NATURALISTE (Paris), Mar. 15, 1891.—Diagnoses of new microlepidoptera,* P. Chretien.

BULLETIN DE LA SOCIÈTE D'ETUDES SCIENTIFIQUES D'ANGERS, Nouvelle Serie, xix annee, 1889; Angers, 1890.—Catalogue of the Coleoptera of Maine-et-Loire, part 3, J. Gallois.

MEMOIRES DE LA SOCIETE DES SCIENCES NATURELLES ET ARCHEOLOGIQUES DE LA CREUSE, vi, Gueret, 1890.—[Habits of] the Psyllidæ, E. Pissot.

ASSOCIATION FRANCAISE POUR L'AVANCEMENT DES SCIENCES, 18me Session; 2d part, Notes and memoirs, Paris, 1890.—Fossil insects of Aix, H. Nicolas. Hymenoptera of the south of France—the genus *Osmia*, H. Nicolas. On the distribution of the organs of taste in insects, A. S. Packard.

SOCIETE LINNEENNE DU NORD DE LA FRANCE, No. 213, March, 1890.—Observations on the parasites of *Liparis salicis* Dup., L. Carpentier. No. 215, May, 1890.—Materials for the catalogue of Orthoptera of the Somme, M. Dubois.

L'ENTOMOLOGISTE GENEVOIS, 1re Annee; 11e and 12e livraisons, Dec. 15, 1890.—Monographic essay of the European species and those of neighboring countries of Phalacridæ. Enumeration of the European and Circumeuropean species of Hydronomidæ.* Studies on some Pompilidæ of Europe and neighboring countries. New Hymenoptera.* Materials for the Swiss Dipterous Fauna; all by H. Tournier.

HORÆ SOCIETATIS ENTOMOLOGICÆ ROSSICÆ, t. xxiv, St. Petersburg, 1890.—Insects lately collected by G. N. Potanin in China and Mongolia: VII. Buprestidæ, Œdemeridæ, Cerambycidæ,* L. Gangelbauer; *Gaurotina*, *Ischnorrhabda*, *Morimospasma*, n. gen. X. Coleoptera (*Neodorcadion* and *Compsodorcadion*)* and XI. *Cymindis*, *Pseudopelta*, *Lethrus*,* B. E. Jakowleff. XIV. Hymenoptera Aculeata,* Dr. F. Morawitz. XV. Curculionidæ,* J. Faust; *Lechrioderus*, *Rhinodontus*, *Derelobus*, n. gen. XVI. Chrysomelidæ and Coccinellidæ (appendix),* J. Weise; *Phola* n. gen. XVII. Hemiptera-Heteroptera,* B. E. Jakowleff.—Insects lately collected in Central Asia on the journey of N. Przewalski. XVI. He-

* Contains new species other than North American.

miptera-Hêteroptera,* B. E. Jakowleff. XVII. Formicidæ from Thibet,* G. Mayr. Turanian Cicindelids, A. Wilkins, 2 plates. Aralo-Caspian Coleopterous Fauna. XIII. Meloidæ and Cantharidæ,* W. Dokhtouroff, 1 plate. Diagnoses of new Coleoptera from central and eastern Asia,* A. Semenow, nine new genera. New and known Histeridæ from European and Asiatic Russia, J. Schmidt; *Dendrophilopsis* n. gen. Some words on *Cychrus* from the Caucasus, A. Starck. Hymenoptera of Korea,* C. Radoszkowski. Proposal of a new method of preserving collections of insects against the attacks of their enemies, A. Wilkins. Addition to my works on the genus *Aricia* s. lat , J. Schnabl. Contribution to the knowledge of the genus *Psalidium* Illig.,* J. Faust. On the Hemipterous Fauna of Russia and the surrounding countries,* B. E. Jakowleff; *Periphima*, *Mimula*, n. gen. On the biology and systematic position of the genus *Chermes* L., N. Cholodkowsky, figs. Essential characters of some genera and subgenera of Anthomyidæ, J. Schnabl. Hymenoptera collected on Mt. Ararat,* Gen. C. Radoszkowski, figs. On the Thelyphonidæ in the collections of some Russian museums, J. Tarnani, 1 plate. Notice on *Lethrus* Scop.,* B. E. Jakowleff; *Abrognathus*, *Heteroplistodus*, n. gen. New Trans-Caspian Fossorial Hymenoptera,* Dr. F. Morawitz.

BULLETIN DE LA SOCIETE IMPERIALE DES NATURALISTES DE MOSCOW, 1890, No. 2. [On Rhopalocera], 1 plate. *Tomicus Judeichii* Kirsch, T. Teplouchow.

TRAVAUX DE LA SOCIETE DES NATURALISTES A L'UNIVERSITE IMPERIALE DE KHARKOW, t. xxiii, 1890 (in Russian).—Notes on the histological structure of the digestive apparatus of the Myriapoda, N. Bieloussow. Description of some species of the genus *Rhyssa* Grh. of the fauna of the government of Kharkow, W. A. Jarochewsky.

VERHANDLUNGEN K. K. ZOOL.-BOT. GESELLSCHAFT IN WIEN, xl. Bd., III. Quart, 1890.—On the stronghold of *Hypoderma lineata* Villers from [the researches of] Dr. Adam Handlirsch, and other researches and observations on Œstridæ, Dr. F. Brauer, figs. *Cecidomyia pseudococcus* Thomas, E. H. Rubsaamen. Larva and manner of living of *C. pseudococcus* n. sp., Dr. F. Thomas.—IV. Quart, 1890.—Identification table of the Heteroceri (Coleoptera) of Europe and the neighboring districts as far as known,* A. Kuwert, figs.

ENTOMOLOGISCHE NACHRICHTEN, xviii, No. 6, March, 1891.—Diptera collected on the island of Zante by Dr. O. Schmiedeknecht, V. v. Roder. New Chilian species of Vespidæ,* A. Schletterer.

Doings of Societies.

ENTOMOLOGICAL SECTION OF THE ACADEMY OF NATURAL SCIENCES.—A regular stated meeting was held March 26, 1891, Dr. Horn, Director, in the chair. Members present: Matindale, Laurent, Welles and Skinner.

* Contains new species other than North American.

Associates: Fox, Calvert, Liebeck, Dr. Castle. Visitors: Mr. Nell and Mr. Boerner. The following papers were presented for publication in the Trans. Am. Ent. Soc.: Notes on some *Noctuidæ*, with descriptions of new genera and species, by John B. Smith. On the species of *Trypoxylon*, inhabiting America, North of Mexico, by Wm. J. Fox. Catalogue of the described species of South American *Asilidæ*, by S. W. Williston. A revision of the species of *Euclea*, *Parasa* and *Packardia*, with notes on *Monoleuca* and *Varina ornata* Neum., by H. G. Dyar. Dr. Horn spoke of the importance of those members interested in Coleoptera, collecting *Agrilus*. He had noticed that those inhabiting the United States North of Mexico formed a group peculiar to themselves. There appears to be a series of species in each group, that are parallel to series of other groups. Mr. Martindale mentioned the emergence from the chrysalis of a specimen of *Papilio asterias*. Mr. Welles had found a specimen of *Scoliopteryx libatrix* on the 24th of the month; he did not know whether it hibernated or not. Dr. Horn placed on record the finding of *Bembidium lampros* Herbst. at Cambridge, Mass., and in Michigan by Mr. Schwarz, and at Ottawa, Canada, by Mr. Harrington. The determinations were made by Mr. H. W. Bates, to whom specimens were sent. Mr. Calvert presented a blue-print copy of a manuscript Check-List of the *Odonata* of North America (including Central America and the West Indies), which he had compiled for private use. He stated that according to this list the number of genera and species in the United States was 56 and 240 respectively; that of these there were either in the collection of the Am. Ent. Soc., or in his own collection, American specimens of 53 genera and 159 species, and that two of the remaining genera were represented by European specimens. In but one of the subfamilies were there less than 65 per cent. of the species represented, and that was the *Gomphina*, where, out of fifty species, but 16 were represented. The above figures did not include a number of undescribed species in both the collections. Mr. Martindale exhibited a photograph of the rare moth *Erebus zenobia*, the original of which was captured by Mr. Lewis Ullrich at Tiffin, Ohio. Mr. Laurent reported once having seen a specimen of *Anthocharis genutia* flying in the streets of the city. The Section decided to take part in the annual meet of entomological societies to be held July 4th next. Mr. Philip Nell was elected an associate.

HENRY SKINNER, *Recorder*.

OBITUARY

Dr. J. M. J. af Tengstrom, author of a work on the MICRO-LEPIDOPTERA of Finland, died Dec. 26, 1890, aged 69.

Errata to Vol. II, No. 4.

Page 80, line 18 from top, for *Colymbetes* read *Corymbites*.

ENTOMOLOGICAL NEWS for April was mailed March 28, 1891.